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Teaching journalism in the information age

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The information age — the product of the digital revolution — has massive implications for journalism and journalism education. The key issues include major legal changes associated with the world of cyberspace, the economic consequences of newsgathering in a digital environment, and ethical matters relating to convergence and the increased pace of life. All of these factors will influence the type of education that journalism students need. This paper discusses aspects of journalism education that need to be addressed in the light of these changes. It concludes that the best form of journalism education is at postgraduate level.

For generations, journalism programs throughout the English-speaking world have taught a set of essential skills. Their curricula expected students to learn about collecting good information, writing well and writing for a specific audience, while acknowledging the importance of accuracy — all within a context of an awareness of legal constraints and ethical issues. These are all admirable and necessary skills, and need to be part of any curriculum, but this paper suggests that journalism education in the twenty-first century needs more. The executive director of the Center for New Media at Columbia University's Graduate School of Journalism summarised the situation when he noted that most American journalism programs rested on late-nineteenth century teaching models. Their curricula were organised "along early twentieth-century technological lines" (Pavlik 1998). This article accepts the importance of core journalism skills but argues that journalists in the next millennium also need:

- better critical thinking;
- an improved ethical armoury;

- better research and data-management methods;
- computer-assisted reporting, especially use of the Internet and email;
- the ability to cope in a fast-changing environment;
- to work collaboratively, under minimal supervision; and
- to adopt a global perspective

Why do students need these extra tools? Because they are entering an environment that is radically different to what their colleagues in the pre-information age experienced. This paper begins by considering the changing environment as we move further into the information age.

The changing legal environment

Legal issues will be dealt with relatively quickly here, because they are beyond the scope of this article. Massive changes in content — caused by the availability of information in digital form — will produce massive changes in society's response to the issues of copyright, defamation, censorship and privacy. These are major concerns and require separate consideration. The Government introduced the Copyright Amenity t (Digital Agenda) Bill 1999 in response to the challenge to the traditional approach to copyright arising from, among other things, the rapid increase in the use of the Internet (White 1999). The changes have generated controversy. Publishers and author groups have warned that rushed changes will leave Australian writers "defenceless in cyberspace" . They claim that the government did not leave enough time for responses to its exposure draft of the Bill. This so-called "digital reform bill" was intended to update ageing copyright legislation for the Internet and e-commerce (Manktelow 1999).

In June of 1999, the NSW Supreme Court ruled that any attempt to muzzle an Internet site in that state because it allegedly contained defamation would be unenforceable and legally improper. Justice Caroline Simpson declined to issue an injunction sought by an Australian bank to restrain a former employee from publishing material on the Internet, despite being satisfied that the material "conveyed imputations that were defamatory". The site was published in the United States.

The judge noted that an injunction to restrain defamation in NSW was intended "to ensure compliance with the laws of NSW" but was not designed to superimpose that state's laws "on every other state, territory and country of the world". This case has major significance for defamation law in this country (Bice 1999, p.3).

The changing work environment

Sub-editors in Sydney have been producing the features pages of two Singaporean daily newspapers since December 1994, along with some of the publications' news pages. They edit Life! — the features section of the *Straits Times* — plus foreign news and business, leader and shipping pages in the paper. The 10 full time and five regular casuals on the sub-editors' table also work on news and feature pages for *The New Paper*, a tabloid from the same stable, owned by the Singapore Publishing Company. The head of the Sydney bureau said the pages were produced in Australia because of "a larger pool of experienced subs in Sydney" These sub-editors receive the same pay rates as on Australian metropolitan dailies, based on their level of experience. Some are native-born Australians and others are migrants from Singapore and Malaysia (Khoo 1999).

The computers in the Sydney office are on the same local area network as in the Singapore office. The Singapore Publishing Company leases a 24-hour dedicated line. The Sydney bureau chief, Teng Guan Khoo, noted:

> Working in the Sydney office is like working in Singapore. All subs here log on as if they were in Singapore. We are virtually just in the next room to our Singapore counterparts. There is voice link to Singapore on the same leased line and the Sydney office is just a telephone extension on the main Singapore PABX [internal telephone exchange]. We contact the subs and production dept in Singapore by dialing their extensions. We call up the stories from the Singapore database just like anyone else in Singapore and sub them. There is Picture terminal where we can access the library of current and archived pictures, crop and size them up and send them to production (Khoo 1999).

The completed broadsheet pages are printed in Singapore, either as a proof or a bromide, by hitting an "output" button on the terminals in Sydney. Khoo noted that technology allowed a newspaper in search of skilled labour to open a branch office thousands of kilometres away "and still operate like it was in the next room".

Microsoft chairman Bill Gates pointed out that in the digital world, jobs go to areas with high skills and low costs:

> Knowledge workers in industrialised countries will, in a sense, face new competition — just as some manufacturing workers in industrialised countries have experienced competition from developing nations over the past decade. This will make the information highway a powerful force for international trade in intellectual goods and services, just as the availability of relatively inexpensive air cargo and containerised shipping helped propel international trade in physical goods (Gates 1995, p.261).

The Singapore Publishing Company's hiring of Australian sub-editors provides an example of Gates' statement. Khoo noted that another company was about to start a business offering sub-editing skills to newspapers around the world via the Internet, but was reluctant to elaborate because of commercial sensitivity.

Most reporters with the Bloomberg news agency have been multi-skilled since the early 1990s. In 1995 the editor of Bloomberg Business News for Australia and New Zealand noted that technology was changing journalists' lives "radically".

> The days when most reporters could say they will only work for print or for radio may be fast coming to an end. Every Bloomberg Business News reporter — and there are now 370 reporters and editors in the organisation — is now expected to carry a tape recorder to a press conference and to do broadcast interviews on a regular basis (Howell 1995).

Howell also said that digital technology was having an impact on the size of television camera crews. His 1995 prediction is already a reality in some areas of the world:

> Don't be surprised if reporters of the future turn up at an interview, sit he camera down on a table and produce a broadcast-quality product single-handedly (Howell 1995).

That year Bloomberg Business News had 370 reporters in 56 bureaus, compared with Reuters' 1600 journalists at 128 bureaus. Yet the volume and range of their respective outputs was about the same (Holley 1995, p.47). This immediately raises concerns related to the quality of journalism produced, and the potential for abuse of employees. Is Bloomberg a model for the future world of work? Holley concluded:

> Michael Bloomberg makes no apologies for 'sweatshop' conditions. "We hire people who are workaholics," he says. "Anybody I've ever known who's accomplished anything works very hard." . . . Bloomberg's work ethic would seem to be a recipe for burnout and mistakes (Holley 1995, p.50).

Early in 1999, management at Australian Associated Press proposed that reporters use digital cameras and mini-disk voice-recording equipment. The aim was for them to provide sound bites and photographs as well as text. The *Australian* reported that meetings of journalists in Sydney in late March "overwhelmingly rejected the proposal" (20 March 1999). AAP's editor-in-chief said the digital camera and mini-disk proposal was "step one" in the organisation's move from a "text-based provider of news to a multimedia provider" Digital technology meant it was possible to repackage information and "convergence was the future", particularly datacasting associated with the introduction of digital television (Vermeer 1999). With datacasting, digital information such as text and image can be piggybacked on the television signal. As of May when this article was written, negotiations between AAP and its journalists were continuing.

The changing economic environment

The example of the *Straits Times* is happening elsewhere, a reflection of how changing digital technology impacts on the economics of news production. Until this year (1999) Marin county, just north of San Francisco, was a single newspaper area — a common enough situation in the United States. About 110,000 adults read the county's daily, *The Marin Independent Journal,* which first started publishing in 1861. The paper's first editions arrives at news racks and stores about 5.30am, while the afternoon edition is delivered to homes by 5pm.

The paper is owned by Gannett, a Fortune 200 company that publishes more than 90 daily newspapers in the United States, including *USA Today*.

A new daily was scheduled to start in the county in mid 1999. But most of the staff were based not in Marin county, but in New Delhi. Why? Because salaries are considerably lower in India and technology skills relatively high. Digital technology contracts geography. It is relatively easy to produce a daily paper in another country, several thousand kilometres away. The paper employs a handful of journalists in Marin county to produce local stories, along with a bank of telephone salespeople to accept advertising. All other editorial functions take place in New Delhi, headquarters of the publication's owner, the *Asian Age*. Publisher MJ Akbar was reluctant to comment, citing commercial sensitivity (Akbar 1999).

Digital television means a similar scenario could easily occur in broadcasting. In San Francisco, KGO-TV spent $US25 million in 1999 converting the station in readiness for high definition digital television (HDTV). KGO's senior vice president said that HDTV allowed a master station such as KGO — owned by the American Broadcasting Company, itself owned by Disney — to offer break-outs to up to a dozen affiliates. He noted that video-tape editors in San Francisco were paid on average of $US 85,000 a year, plus benefits. People doing the same job at one of KGO's affiliated stations in Fresno, about 300 kilometres away, earned $US 35,000 a year, plus benefits. "It makes economic sense for editors to be working in Fresno, because with digital equipment it does not matter where they are based. This will gladden the hearts of a lot of network accountants (Topping 1999).

Teaching in the information age

Given the changes already occurring because of the digital revolution, how best can journalism educators prepare their students for the information age? Of the list of new attributes offered at the start of this paper, the most essential are a heightened respect for ethics and the need for clarity of thought. Clear thinking and a clear

ethical sense form a strong foundation from which to adapt to rapid change, itself a product of the digital revolution. They provide a moral compass for living in the information age.

The biggest media development in the United States in the past two to three years has been the advent of Web-based publications, most started by entrepreneurs with little cash. One of the features of these start-ups is the blurring of boundaries between editorial and advertising. Indeed, in the digital world even America's greatest publication of record, *The New York Times*, appears to have agreed to something on its Web site that it would never do in the print edition. In early 1997 the paper signed a landmark agreement to place Barnes & Noble "buy" buttons next to its online book reviews (Barnesandnoble.com is a competitor with Amazon.com for the booming e-commerce market in books).

The authoritative *Online Journalism Review* commented:

> A careful reading of the hallowed *New York Times* this year [1999] yields jaw-dropping results: In one remarkable 35-day stretch in February and March, the *Times* ran five articles and two opinion columns, clocking in at a whopping 13,800 words total, effectively sullying the reputation of Amazon.com — Barnes and Noble's biggest and most feared competitor. In only one of those articles did the *Times* disclose its influential agreement with Barnesandnoble.com (Welch 1999).

The *New York Times* itself noted that American media companies had traditionally distinguished between "paid advertising and features created by editors". "But on the Internet, with bookstores becoming literary reviews and news outlets turning into travel agencies, it is getting hard to find a source of information that does not have a financial stake in what users do with what they publish" (Hansell & Harmon 1999). Journalism educators must provide students with the intellectual equipment to enter this rapidly developing area of employment. But this blurring of boundaries means that journalism educators must also introduce more on the ethical issues connected with this and other digital-era practices.

Another feature of Web-based publishing is the dynamic nature of the editorial content. Stories change quickly. The mobile telephone and email allow reporters to contact people quickly and obtain responses to developing stories. This increased speed also increases the potential for errors, and for contacts to provide misinformation, especially in a business environment where people buy and sell shares based on slight changes in the market.

Ethical awareness and clear thinking need to be the foundation stones of any journalism course in the digital age, along with the ability to learn how to learn. Learning how to learn is more important initially than absorbing content. Trainee butchers, for example, need to know how to use their knives before learning about the cuts of meat. Students spend thousands of hours getting an education, but how many hours are spent learning how to learn? As Buzan says, all humans receive a wondrous computer at birth — but where is the manual that shows them how to use it?

Journalism educators need to return more than ever to inculcating the core attribute of respect for accuracy along with clarity of thought. Should and can these be taught? Regardless of the answer, they can certainly be modelled, in the sense that journalism educators can demonstrate the skills via their words and actions. One of the earliest and best pieces of advice I received as a junior academic was that "more is caught than taught". It is also possible, via problem-based learning scenarios, to place students in situations which require them to think for themselves in terms of ethical issues. In these situations it is important to provide students with opportunities for reflection and discussion. Discussion should take place after reflection. Queensland University of Technology provides an excellent Web site which contains examples which students could use to practise ethical dilemmas <www.maj.arts.qut.edu.au/ethix/>. If students are exposed to enough ethics case studies before they find jobs they are at least fore-armed. As the adage says: "Forewarned is fore-armed" Teaching accuracy is relatively simple. Tell students at the start of their degree that they will be penalised heavily for errors of fact, and stick to the warning when assessing. Reward students who make that extra effort to ensure accuracy; students respond quickly to this carrot and stick approach.

Ethical scenarios need to be carefully controlled. They should probably involve mock scenarios rather than real-life situation. Green expressed concern about allowing journalism students to practise investigative reportage using CAR methods in real-world situations because of the danger of students getting involved in issues beyond their control. He maintained that students undertaking investigative reports "would be best served by doing strictly controlled 'lab' experiments rather than live reporting assignments" (1997 p.24). Any educator had a "duty of care" which required that educator "to ensure the students come to no physical, psychological (or legal) harm". In the case of his students who undertook complex investigative reports, he noted that they "may well have been placed in harm's way" (1997 p.29).

The ancient Greeks referred to the curse and blessing of any changing environment. The down side of the Web, email and other electronic information sources is the vast volume of data offered. Information overload has replaced information scarcity as an emotional, social and political problem. *New Scientist* magazine reported that on average European business people sent and received 180 email messages a day in 1997. The increased pace in the exchange of information was not a trend that was about to be reversed (Walton 1998). Sports journalist Roy Masters told *The Australian* that he spent at least an hour of every day reading his email and other correspondence. His brother Chris, a reporter with the ABC's *Four Corners* program, said that 95 percent of his work was sifting through information he received from the public (quoted in McGregor 1999). In a world of information scarcity, journalists perform the vital community service of "acquiring and transmitting fresh data". But as information has become super abundant over the past 50 years "this hunter-gatherer role has been rendered partially obsolete" (Shenk 1998, p.166):

> In fact, journalists are more necessary in the information glutted world. As a sceptical analytical buffer and — now more than ever — as an arbiter of statistical claims, the news media is an indispensable public utility, every bit as vital as our electricity and gas lines. In a world with vastly more information than it can process, journalists are the most important processors we have.

> They help us filter information without spinning it in the direction of one company or another. Further, as society becomes splintered, it is journalists who provide the vital social glue to keep us at least partly intact as a common unit. For democracy as we know it, a bypassed media would be a disaster (Shenk 1998, p.167).

Information overload can produce errors, in the sense that students (and working journalists) misreport events because they have insufficient facts, disguised as excess data. Students in the digital world need the new skill of data management. Johnson (1994) suggested that good journalists needed to move past the simplistic formula of an idea plus rudimentary research to produce an adequate story. He maintained that students needed to learn a more evolved process, which he called the RRAW-P process. "The variables in this process can be generalised as Research, Reporting, Analysis, Writing and Packaging. That entails, ideally, eight definable steps for the reporter/writer." Step one, getting an idea, is followed by the quick, initial — sometimes intuitive — formation of questions and key words related to the idea. The next step involves initial research, which leads to the formulation of new questions. "Ideally, these questions, or hypotheses, expand upon former approaches to the topic and challenge old or current assumptions." The fifth step, the gathering of data and information, is the real reporting stage. "In the traditional application of the process, a reporter spent most of his or her time interviewing sources on the telephone or in face-to-face conversations. Today, however, an equal amount of time should be spent acquiring quantitative and textual data relevant to the issue." The sixth step involves analysis of the collected data and information, followed by the reporter sketching an outline for the story. The eighth stage is writing the story and sending it to a sub-editor (1994 p.59).

Johnson says that reporters too often take the simplistic questions of step two and jump to step five "with little more background than the clips from last week's issues of their own newspaper". The resulting stories produce a level of understanding, context and perception "equal to what is in a single year's phone book". The key stage of Johnson's process is the research.

> That means reporters go not only to the publication or station's library for background data. They must be trained to throw a wide loop around their information resources when asking: What are the major issues relevant to a topic? What is the social, political and economic context? What is the chronology of events leading up to the current news value? Who are the most interesting and knowledgeable sources and where are they? If there is a problem, what have other locales, agencies or individuals done to solve it? What is the cliché interpretation of the topic and what seems to be leading-edge thinking and analysis? Most importantly, what seems to have gone unreported about the topic? We are, after all, in the news business (Johnson 1994, p.59).

Johnson maintains that students must receive a solid grounding in fundamental — that is, traditional library — research techniques early in their degree. They should be able to transfer those generic skills to the digital environment. "Instruction in how a library is organised and works — in tandem with training in relevant computer skills — should begin in the student's first semester at the university and/or in the journalism major. The instruction should continue and be integrated throughout the journalism curriculum at an ever-increasing level of expectation" (1994 p.60).

Changing work practices

The digital revolution is also changing work practices. It is impossible for one person to know everything about a subject or a technology. The era of the jack or jill-of-all-trades is fast disappearing. Journalism needs more specialists and experts, as does journalism education. Steve Doig, a former *Miami Herald* reporter who holds the prestigious Knight Chair in Journalism at Arizona State University, noted that the variety and complexity of skills needed in the newsroom had mushroomed in the past decade. "Ten years ago I was a master of all parts of computer-assisted reporting. Now it would be unrealistic for anybody to think he or she commands expertise across the spectrum" (quoted in Simon & Napolitano 1999, p.22).

But specialisation contains a paradox. As experts acquire their specific knowledge base, the possibility of knowing other subjects and acquiring other skills is reduced. Shenk suggests the "real challenge" for journalists

is the willingness to share information with one another, and to transform it into knowledge. "This is not so much fact hunting as it is data gardening." But some journalists have difficulty adapting to a new paradigm of sharing information. The "paramount challenge" of the modern journalist is "to be tenders of electronic archives of all human knowledge, more like proactive electronic librarians than news flashers". Such a world "necessitates a restructured value system in which sharing and summarising existing information is more of a priority than is stumbling onto genuinely new data". The old paradigm has become outmoded.

> New information for its own sake is no longer a goal worthy of our best reporters, our best analysts, our best minds. Journalists will need to take a more holistic approach to information as a natural resource that has to be managed more than acquired (Shenk 1998, p.169-70).

One potential solution is the introduction of team-based reporting in the newsroom, and team-based teaching in the classroom. Columbia University's Graduate School of Journalism requires students who produce Web pages to work in teams of three: a writer, designer and technical support. Students weak in one area learn from their colleagues. They also experience what it is like in the real world, where people need to cooperate to get the job done (Klatell 1999).

This form of teaching and learning introduces another skill that will be needed in the digital age: the ability to adapt in a fast-changing environment. Can this be taught? Yes, but it is better that it be learned; that is, student must take responsibility for learning. Educators need to establish an environment in which students experience rapid change. Over time, students acquire tolerance and acceptance. But it takes time. Education takes time; that is what differentiates it from training. The Latin root for education is *educere*, as in to draw out or develop. Education is a process, during which students have qualities brought out in them. The three or more years that people spend at university gives them time to develop. Training is not enough in this new environment. You can train a person to recite poetry but as with any form of rote learning the issue is always how much has been understood. It requires education to appreciate poetry, and it needs a special kind of education to create poetry. Should journalism, then, be

offered at postgraduate level after an individual has acquired a degree? In a nutshell, yes. Another option would include offering four-year degrees, which involves making the honours year less academic and more related to learning professional skills. These issues need to be the subject of another article.

Another necessary skill for the digital age is an awareness of innovation, allied with business methods and practices. The keynote speaker at the JEA's annual conference in western Sydney in 1998 predicted that students would be working in careers "not yet imagined, employing skills and technology not yet invented" Dr Jay Black said that many of the jobs now available in journalism and related media did not exist a generation ago. Indeed, some did not exist a decade ago — in the late 1990s we find advertisement for jobs like Webmaster, online reporter and multimedia producer.

Dr Edward De Bono, the internationally-recognised thinker, suggested that entirely new professions would emerge in the coming decade that involved filtering information:

> In the future there will emerge a series of intermediary professions — sorters, digesters, researchers — that will act as a kind of reduction valve. It is no longer possible for every user to sort through all of the information they want (De Bono 1999, p.58).

Most of the new positions in the late 1990s have come in new media, particularly Web publishing, and most particularly in niche publishing. Witness the arrival of specialist Web sites for Latinos <www.latino.com> and African Americans <www.netnoir.com>, and specialist sites such as CNET, the computer network <www.cnet.com>. Interviews with the creators of these sites — almost all journalists — produced a prevailing theme. They had received a good education about journalism and technology, but they knew little about the world of business (Singh 1999, CasSelle 1999, Luquis 1999).

Given that we are in the information age, we need to be preparing students for life in this new age. The core segment of a journalism curriculum needs to be information skills. Students should learn to be information workers first before they become broadcast or print reporters. Columbia University's Graduate School of Journalism

established a Center for New Media in 1994 to explore the impact of new technologies on journalism and to "provide intellectual leadership for an industry undergoing rapid transition". The center's executive director noted that new media journalism needed to be "more than just another course in an already overcrowded curriculum":

> A new, integrated curriculum is needed in which students are taught the principles, practices, values and standards of news reporting that cut across all media boundaries. Rather than learning to be 'newspaper', 'magazine, 'television', 'radio' or 'online' reporters, they should simply be taught to be journalists working in a digital age (Pavlik 1998).

Given that journalists and business people operate in a global environment, we need to inculcate a global perspective in our students. That said, we also need to accept that many will work initially as local reporters. The Greenpeace slogan "Think globally and act locally" seems a reasonable response to this situation. Students can use the Internet to cherry pick good ideas from around the world. As an interesting aside, the Pacific Islands News Association (PINA) reported in May that a part-time master of journalism program would be available "soon" to journalists in member countries of the Council of Asia-Pacific Press Institutes. The two-year degree would be offered through a Filipino university working with a German journalism school experienced in online education. Funding would come from Germany's Konrad Adenauer Foundation (PINA 1999). Surely an example of the global environment for education.

Fitting it all in

The question "how do we fit it all in?" usually arises here. I prefer to rephrase the question: For the sake of our students, can we afford not to introduce these new skills? It can be done, but it requires educators to work smarter and to adopt these new skills themselves. Remember, more is caught than taught. We need to move from being the sage on the stage in a "chalk and talk" teaching environment to a place where educators are more like the coach on the sideline. We need to become more like mentors with a degree in humility, because we educators no longer possess all the knowledge. Félix Gutiérrez, a

former journalism professor, is executive director of the Freedom Forum's Pacific Coast Center. At the 1999 Technology Conference for Educators, which the Freedom Forum hosted in San Francisco, Gutiérrez recalled "the glory days" of being a professor when you could count on the teacher for three things:

1 Having the knowledge.

2 Teaching in a structured way.

3 Evaluating how well the student learned the material.

Said Gutiérrez: "The student came in saying 'I need to know and I'll learn it your way since you have the knowledge, and I'll do the work your way for you to evaluate'." But the situation has changed markedly because:

> Technologies are changing rapidly, and there is a gap between campus and the workplace — and the campus is lagging behind. Students come to class with different technological knowledge obtained in different ways. A certain level of knowledge or lack of knowledge among your students cannot be assumed. And students may know something the faculty doesn't. That flips the dynamic. The way media are produced and the way people are using them are changing (Gutiérrez 1999).

Technologies are changing so quickly that there is a widening gap between the university, with its one or three-year technology replacement cycles, and the workplace, where money is more readily available for the latest gear. But universities should not use outdated technology as an excuse not to teach new media skills. Low-end technologies such as getting students to produce email newsletters still provides students with the chance to experience making new media products. In many cases, an email newsletter costs less than producing a paper-based student newspaper. Web publishing is relatively inexpensive because much of the software can be found free on the Web. The Internet is the future, and computer-assisted reporting (CAR) one major aspect of that future. The cover story of the March/April edition of the *Columbia Journalism Review* pointed out that the digital reporting revolution was "reaching warp speed" Simon and

Napolitano reported that CAR was the vital skill to acquire. The future belonged to reporters "who become more and more computer literate" (1999 p.26).

Postgraduate journalism?

Should journalism be offered at postgraduate level? The answer is yes and no. For some types of journalism — community newspapers, say, or newsletter production — a three-year degree may be sufficient. But for a journalist wanting to work on a metropolitan daily, or seeking to specialise in an intellectually-demanding round, then they need education at postgraduate level. That is, they should do a general degree in something related to their specialisation — such as economics, law, politics or science — and then do a postgraduate diploma or masterate in journalism. Given that the time commitment for both is roughly the same, students are probably better off doing a masterate. Postgraduate programs will blossom in the coming decade as under-educated journalists realise that they need more specialised knowledge. The future in education belongs to universities that can offer those courses, probably online.

The key issue is educators' willingness to grasp the nettle of opportunity in the digital revolution. It is not a case of whether we should — we must; otherwise we cheat our students. A better-educated journalism workforce must be our aim for the next millennium.

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